WHAT IS CLAIMED IS:

1. A magnetic force rotating apparatus comprising:

a rotatable rotary body;

a permanent magnet apparatus in which a plurality of permanent magnets are arranged so as to direct one magnetic pole among mutually corresponding poles to a rotational direction and another magnetic pole to an inverse rotational direction at a substantially uniform interval in a circumferential direction, said permanent magnet apparatus being provided along a circumference in an outer peripheral portion of said rotary body;

electromagnet means having two different magnetic poles so as to generate two different magnetic fields and provided so as to simultaneously apply a rotational energy in one direction in opposite to the magnetic field from said magnet apparatus; and

a control unit intermittently exciting the electromagnet means.

2. A magnetic force rotating apparatus as claimed in claim 1, further comprising a balancer provided in said rotary body so as to keep a balance with said permanent magnet apparatus.

3. A magnetic force rotating apparatus as claimed in claim 1 or 2, wherein said permanent magnet apparatus is structured such that a plurality of permanent magnets

are arranged at a substantially uniform interval in a circumferential direction so that that one magnetic pole among the mutually corresponding magnetic poles is positioned in one side surface portion of said rotary body so as to be directed to a rotational direction and another magnetic pole is positioned in another side surface portion of said rotary body so as to be directed to an inverse rotational direction, and said electromagnet means is provided so as to be opposed to the magnetic field output from said magnet apparatus.

4. A magnetic force rotating apparatus as claimed in claim 3, wherein said electromagnet means is opposed to the respective magnetic fields output from one and another magnetic poles of said magnet apparatus, and two sets of said electromagnet means are provided so as to form a pair.

5. A magnetic force rotating apparatus comprising:

a rotatable rotary body;

a permanent magnet apparatus in which a plurality of permanent magnets are arranged so as to position one magnetic pole among mutually corresponding poles in an outer peripheral side of said rotary body and another magnetic pole in an inner peripheral side of said rotary body and arrange magnetic pole pairs of said respective magnet at a uniform interval in a circumferential

direction with applying a substantially fixed angle of incline with respect to a radial line of said rotary body, said permanent magnet apparatus being provided along a circumference in an outer peripheral portion of said rotary body;

electromagnet means having two different magnetic poles so as to generate two different magnetic fields and provided so as to simultaneously apply a rotational energy in one direction in opposite to the magnetic field from said magnet apparatus; and

a control unit intermittently exciting the electromagnet means.

6. A magnetic force rotating apparatus as claimed in claim 5, further comprising a balancer provided in said rotary body in such a manner as to keep a balance with said permanent magnet apparatus.